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## **Eradication of viral haemorrhagic septicaemia in Danish aquaculture**

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Viral haemorrhagic septicaemia (VHS) virus was first isolated in Denmark in 1962, when more than half of the approximately 800 Danish fish farms were considered to be infected. Today, 50 years later, the country obtained status as EU approved VHS free zone. In the years in between very significant resources have been used to control and eradicate the disease.

The control program included strict biosecurity and preventative measures, trade regulations, zoning and intensive inspections and laboratory testing. During the first decades of control and eradication programs the number of infected farms was significantly reduced while the curve flattened the last 20 years. It was only after a large and costly coordinated action in 2009-2013 including all affected areas that the country managed to free itself totally from VHS.

Molecular tracing of the origin of VHSV isolates revealed that despite strict trade regulations and ban on introduction of live salmonids into the country VHSV seemed to have crossed the borders into Denmark in a couple of cases.

It is the first time that VHS has been eradicated from an endemically infected country. Among the causes of the success are a close collaboration between industry, stakeholders, veterinary authorities and scientists. Also the reduction of the number of farms and novel farming strategies account for the success. Furthermore, in Denmark rainbow trout farming would not survive in the international competition being endemically infected with this serious disease providing a strong incitement for the fish farmers.

Vaccination was not included in the control in Denmark but if licensed, vaccines would have been useful in order to reduce virus load before stamping-out. Similar control strategies will hopefully be implemented in other VHS infected countries in order to improve fish health and efficiently combat the disease.

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